AMENDMENT TO THE CLAIMS

The following is a detailed listing of all claims that are, or were, in the Application.

1-29.   (Canceled)

30.   (Currently amended) An apparatus for processing multimedia data, the apparatus comprising:

a memory; and

a processor configured to perform operations comprising:

receiving segment information about an audio-visual program, the segment information identifying a plurality of audio-visual segments in the audio-visual program, wherein each audio-visual segment is defined by a temporal position in a multimedia stream of the audio-visual program and represents a continuous temporal content portion in the audio-visual program;

generating a hierarchical data structure describing multimedia data and configured to facilitate browsing content in the audio-visual program, the hierarchical data structure including the segment information along with segment group information defining first and second segment groups, each of the first and second segment groups including defining a respective plurality set of audio-visual segments selected from the plurality of audio-visual segments identified by the segment information in the [[a]] multimedia stream of the audio-visual program, wherein said segment group information specifies a respective group type and a respective duration for each of said first and second segment groups, the respective group types indicating that the first and second segment groups represent respective first and second content summaries related to objects or events as depicted in the audio-visual program, and wherein the segment group information includes segment order information defining that (i) the audio-visual segments within the first segment group are ordered relative to each other according to a time sequence that is significant for the first content summary's representation of the corresponding events or objects in the audio-visual program and (ii) the audio-visual segments within the second segment group are unordered

not ordered relative to each other according to ~~the~~ any time sequence that is significant for the second content summary's representation of the corresponding events or objects in the audio-visual program; and

storing the hierarchical data structure including the segment information along with the segment group information in the memory.

31.   (Previously presented)   The apparatus of claim 30, wherein said segment group information includes a level information.

32.   (Previously presented)   The apparatus of claim 31, wherein said level information defines multiple levels.

33.   (Currently amended)   The apparatus of claim 30, wherein each audio-visual segment contained in the first and second segment groups is defined by a respective start time and a respective segment duration.

34.   (Currently amended)   A method implemented by an apparatus for processing multimedia data, the method comprising:

generating segment information about an audio-visual program, the segment information identifying a plurality of audio-visual segments in the audio-visual program, wherein each audio-visual segment is defined by a temporal position in a multimedia stream of the audio-visual program and represents a continuous temporal content portion in the audio-visual program;

generating segment group information for a hierarchical data structure ~~describing multimedia data~~ configured to facilitate browsing content in the audio-visual program; and

transmitting said segment information and said segment group information to a client, wherein said segment group information:

defines first and second segment groups, each of which ~~includes~~ <u>defines</u> a respective ~~plurality~~ <u>set</u> of <u>audio-visual</u> segments selected from <u>the plurality of audio-visual segments identified by the segment information in the</u> [[a]] multimedia stream <u>of the audio-visual program</u>;

specifies a respective group type and a respective duration for each of said first and second segment groups<u>, the respective group types indicating that the first and second segment groups represent respective first and second content summaries related to objects or events as depicted in the audio-visual program</u>; and

includes segment order information defining that <u>(i) the</u> <u>audio-visual</u> segments within the first segment group are ordered relative to each other according to a time sequence <u>that is significant for the first content summary's representation of the corresponding events or objects in the audio-visual program</u> and <u>(ii)</u> the <u>audio-visual</u> segments within the second segment group are ~~unordered~~ <u>not ordered</u> relative to each other according to [[the]] <u>any</u> time sequence <u>that is significant for the second content summary's representation of the corresponding events or objects in the audio-visual program</u>.

35.   (Previously presented) The method of claim 34, wherein said segment group information includes a level information.

36.   (Previously presented) The method of claim 35, wherein said level information defines multiple levels.

37.   (Currently amended) The method of claim 34, wherein the segment group information defines a respective start time and a respective segment duration for each <u>audio-visual</u> segment contained in the first and second segment groups.

38.   (Currently amended) An apparatus for processing multimedia data, the

apparatus comprising:

a memory; and

a processor configured to perform operations comprising:

receiving segment information about an audio-visual program, the segment information identifying a plurality of audio-visual segments in the audio-visual program, wherein each audio-visual segment is defined by a temporal position in a multimedia stream of the audio-visual program and represents a continuous temporal content portion in the audio-visual program;

receiving segment group information defining first and second segment groups in a hierarchical data structure describing multimedia data configured to facilitate browsing content in the audio-visual program, each of the first and second segment groups including defining a respective plurality set of audio-visual segments selected from the plurality of audio-visual segments identified by the segment information in the [[a]] multimedia stream of the audio-visual program, wherein said segment group information specifies a respective group type and a respective duration for each of said first and second segment groups, the respective group types indicating that the first and second segment groups represent respective first and second content summaries related to objects or events as depicted in the audio-visual program, and wherein the segment group information includes segment order information defining that (i) the audio-visual segments within the first segment group are ordered relative to each other according to a time sequence that is significant for the first content summary's representation of the corresponding events or objects in the audio-visual program and (ii) the audio-visual segments within the second segment group are unordered not ordered relative to each other according to [[the]] any time sequence that is significant for the second content summary's representation of the corresponding events or objects in the audio-visual program; and

storing the hierarchical data structure including the segment information along with the segment group information in the memory.

39.   (Previously presented)   The apparatus of claim 38, wherein said segment

group information includes a level information.

40.   (Previously presented)   The apparatus of claim 39, wherein said level information defines multiple levels.

41.   (Currently amended) The apparatus of claim 38, wherein each <u>audio-visual</u> segment contained in the first and second segment groups is defined by a respective start time and a respective segment duration.

42.   (Currently amended) A method <u>implemented by an apparatus</u> for processing multimedia data, the method comprising:

   <u>receiving segment information about an audio-visual program, the segment information identifying a plurality of audio-visual segments in the audio-visual program, wherein each audio-visual segment is defined by a temporal position in a multimedia stream of the audio-visual program and represents a continuous temporal content portion in the audio-visual program;</u>

   receiving segment group information from a provider; and

   storing said received <u>segment information and said</u> segment group information in a hierarchical data structure <s>describing multimedia data</s> <u>configured to facilitate browsing content in the audio-visual program</u> in a client, wherein said segment group information:

      defines first and second segment groups, each of which <s>includes</s> <u>defines a</u> respective <s>plurality</s> <u>set</u> of <u>audio-visual</u> segments selected from <u>the plurality of audio-visual segments identified by the segment information in the</u> [[a]] multimedia stream <u>of the audio-visual program</u>;

      specifies a respective group type and a respective duration for each of said first and second segment groups<u>, the respective group types indicating that the first and second segment groups represent respective first and second content summaries related to objects or events as depicted in the audio-visual program</u>; and

includes segment order information defining that (i) the <u>audio-visual</u> segments within the first segment group are ordered relative to each other according to a time sequence <u>that is significant for the first content summary's representation of the corresponding events or objects in the audio-visual program</u> and (ii) the <u>audio-visual</u> segments within the second segment group are ~~unordered~~ <u>not ordered</u> relative to each other according to [[the]] <u>any</u> time sequence <u>that is significant for the second content summary's representation of the corresponding events or objects in the audio-visual program</u>.

43.   (Previously presented) The method of claim 42, wherein said segment group information includes a level information.

44.   (Previously presented)   The method of claim 43, wherein said level information defines multiple levels.

45.   (Previously presented) The method of claim 42, wherein each <u>audio-visual</u> segment contained in the first and second segment groups is defined by a respective start time and a respective segment duration.

46.   (Currently amended) A storage medium storing a <u>hierarchical</u> data structure ~~describing multimedia data, the data structure~~ configured to be processed by multimedia data processing apparatus <u>to facilitate browsing content in an audio-visual program</u>, the stored data structure comprising:

<u>segment information about the audio-visual program, the segment information identifying a plurality of audio-visual segments in the audio-visual program, wherein each audio-visual segment is defined by a temporal position in a multimedia stream of the audio-visual program and represents a continuous temporal content portion in the audio-visual program;</u>

segment group information defining first and second segment groups, each of which ~~includes~~ defines a respective ~~plurality~~ set of audio-visual segments selected from the plurality of audio-visual segments identified by the segment information in the [[a]] multimedia stream of the audio-visual program, wherein said segment group information specifies a respective group type and a respective duration for each of said first and second segment groups, the respective group types indicating that the first and second segment groups represent respective first and second content summaries related to objects or events as depicted in the audio-visual program, and wherein the segment group information includes segment order information defining that (i) the audio-visual segments within the first segment group are ordered relative to each other according to a time sequence that is significant for the first content summary's representation of the corresponding events or objects in the audio-visual program and (ii) the audio-visual segments within the second segment group are ~~unordered~~ not ordered relative to each other according to [[the]] any time sequence that is significant for the second content summary's representation of the corresponding events or objects in the audio-visual program.

47. (Previously presented) The storage medium of claim 46, wherein said segment group information includes a level information.

48. (Previously presented) The storage medium of claim 47, wherein said level information defines multiple levels.

49. (Currently amended) The storage medium of claim 46, wherein the segment group information defines a respective start time and a respective segment duration for each audio-visual segment contained in the first and second segment groups.

50-53. (Cancelled)

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54.   (Currently amended) The apparatus of claim 30, wherein the respective group types for each of the first and second segment groups specifies specify that the first and second segment groups are related to at least two objects characters represented in the content of the multimedia stream.

55.   (Currently amended) The apparatus of claim 54, wherein the first segment group includes audio-visual segments representing time ordered relation changes between the at least two objects characters.

56.   (Currently amended) The apparatus of claim 30, wherein the segment group information indicates that the first segment group includes audio-visual segments that represent highlights from the multimedia stream.

57.   (Currently amended) The apparatus of claim 54, wherein the audio-visual segments within the second segment group include audio-visual segments representing constant relations between the at least two objects characters.